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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,409	04/15/2004	Tatsuru Morozumi	2927-0172PUS1	6465
2292 7590 05/08/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER RICE, ELISA M	
			ART UNIT 2609	PAPER NUMBER
			NOTIFICATION DATE 05/08/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/824,409

Applicant(s)

MOROZUMI ET AL.

Examiner

Elisa M. Rice

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 1-17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/23/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

The following is a quotation of 37 CFR 1.75(a):

The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

Claims 1, 5, 6, and 7 are objected to under 37 CFR 1.75(a), as failing to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

Claim 1 is objected to because of the following informalities. Line 10 of the claim recites "photographing a background image of a swing place in which a golfer is not photographed and a swing moving image from a scene at address of the golfer to the finish thereof with a camera as color images." "address of the golfer" is unclear, ambiguous language. Examiner recommends that this be changed to "location of the golfer." Correction is required. Claim 1 is objected to because of the following informalities: Line 4 of claim 1 recites, "said infrared image signal in frames as a live (real time) infrared video signal". Line 18 of claim 1 recites "and storing reference color information and coordinate data (positional information) of each mark manually or automatically in advance." The use of parenthesis in this instance is objected to for the following reasons. First, the use of parenthesis in a sentences is typically limited to the inclusion of unimportant, or superfluous information and unimportant, or superfluous information should not be recited in a patent claim with one exception. The MPEP, at

Art Unit: 2609

paragraph 608.01(m) allows for the enclosure of reference numerals, corresponding to the figures, within parenthesis. However, in this case, the term "positional information" is not a reference numeral. It is suggested that applicant choose the most appropriate terms for inclusion in the claim, and delete the other. Examiner will not give weight to "(positional information)" for purposes of examination. Appropriate correction is required.

Regarding **claims 5, 6, and 7**, the use of the phrase "colors of marks having chances to be close to each other or one another, or superimposed one on the other or one on another during a swing are differently set." The use of both "one on the other" and "one on another" is superfluous and confusing and it is suggested that applicant choose the most appropriate term. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/956227. Claim 1 of copending application will be hereafter referred to as C1.

C1 and C1 dependents, C3 and C7, of copending application 10/956227 disclose all of the following: attaching colored marks to plural positions including any one place of a golfer, which is a measurement objective, and at least one necessary position on a golf club that the golfer uses, before the golfer initiates a swing, photographing a background image of a swing place in which a golfer is not photographed and a swing moving image with a camera as color images not only storing the photographed background image into a computer, but also storing plural still images converted from the swing moving image into the computer, adopting, of the still images, a specific still image in which all the marks can be recognized as a reference image and storing reference color information and coordinate data of each mark manually or automatically in advance; setting, on a still image being considered, for each of the mark positions thereon, a search range, which is a region including the position of the predicted mark on a still image adjacent in chronological order to the still image being considered and a wait range which is a region larger than the search range, in consideration of a case where the marks would not be recognized in the search range and setting a color range

Art Unit: 2609

of each mark that is an allowable range, in which colors can be regarded as the same as reference color information thereof; changing the search range of the still image being considered to the wait range thereof in a case where a mark is hidden and not recognized in the search range thereof, regarding a pixel, as a position of a mark, in a case where the absolute value of a difference between a color of the pixel in the still image being considered on which a differential processing has been conducted with the background image in the search range or the wait range and the reference color information falls within the color range and is the minimum of absolute values obtained from other pixels to conduct a color search and obtain coordinate data; and automatically tracking the marks moving during the swing.

This is a provisional obviousness-type double patenting rejection.

Allowable Subject Matter

Claim 1-17 will be allowable if rewritten to correct the objections under C.F.R 75(a) raised by the examiner.

Both U.S. Patent 5,772,522 to Nesbit et al. and published PCT application WO 03/005281 A1 disclose a method of analyzing a golf swing which is accomplished in an automated fashion using markers attached the body of the golfer and/or the golf club for easier tracking and data collection by the system. However, both U.S. Patent 5,772,522 to Nesbit et al. and WO 03/005281 A1 do not disclose positively identifying the markers in question using differential processing with the background image on each of the mark positions to obtain a minimum absolute values between a color of the pixel assumed to be the marker and the surrounding pixels.

Published application US 2004/0005088 A1 teaches a method and system for monitoring breathing movement of an infant. For real-time tracking of the markers, search ranges are set around the markers attached to the infant. When the marker is not located within the search range, then the search region is expanded. While US 2004/0005088 A1 teaches attaching markers to aid in motion analysis and setting

Art Unit: 2609

search and wait ranges around each of the markers, the application fails to discuss background image subtraction to extract the silhouette of the infant and to perform the differential processing to positively identify the marker

None of the reference or record alone or in combination suggest or fairly teach

regarding a pixel, as a position of a mark, in a case where the absolute value of a difference between a color of the pixel in the still image being considered on which a differential processing has been conducted with the background image in the search range or the wait range and the reference color information falls within the color range and is the minimum of absolute values obtained from other pixels to conduct a color search and obtain coordinate data.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elisa M. Rice whose telephone number is (571)270-1580. The examiner can normally be reached on 8:00a.m.-5:30p.m. EST Monday thru Friday.

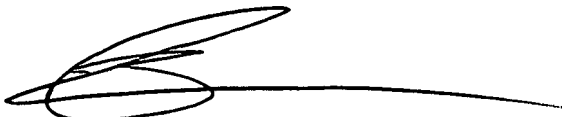
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian P. Werner can be reached on (571)272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2609

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Elisa Rice *ER*
Assistant Patent Examiner
2609

EMR


BRIAN WERNER
SUPERVISORY PATENT EXAMINER